Process Biochemistry, Vol. 32, No. 8, pp. 739–744, 1997
© 1997 Elsevier Science Ltd
All rights reserved. Printed in Great Britain

ELSEVIER

Contents of Volume 32

Number 1

1 Overproduction, secretion, isolation and properties of recombinant alkaline phosphatase encoded in *Escherichia coli*
M. A. NESMEYANOVA, A. E. KALININ, A. L. KARAMYSHEV, N. I. MIKHALEVA and V. I. KRUPYANKO

9 Genetic approach to the intensification of *Rhizobium leguminosarum* bv. *viciae* symbiotic nitrogen fixation
K. M. ZLOTNIKOV

13 Degradation of mazut by selected microbial strains in model systems
A. M. BORONIN, V. G. GRISHCHENKOV, A. V. KARPOV, S. G. SELEZNEV, V. G. TOKAREV, M. U. ARINBASAROV, R. R. GAJAZOV and N. P. KUZMIN

21 The controlled biosynthesis of cellobiase by *Aspergillus* fungi
I. V. SOLOVYEVA, V. M. ANANJIN, A. V. BOEV and O. N. OKUNEV

29 Roquefortine excretion and uptake by *Penicillium crustosum* Thom VKM F-1746
T. V. KULAKOVSKAYA, T. A. RESHETILOVA, T. N. KUVICHKINA and N. G. VINOKUROVA

35 Amylase production by solid state culture of *Aspergillus oryzae* on polyurethane foams. Some mechanistic approaches from an empirical model
M. A. MURADO, M. P. GONZÁLEZ, A. TORRADO and L. M. PASTRANA

43 Pectic enzymes in fresh fruit processing: optimization of enzymic peeling of oranges
M. T. PRETEL, P. LOZANO, F. RIQUELME and F. ROMOJARO

51 Instability of α-amylase production and morphological variation in continuous culture of *Bacillus amyloliquefaciens* is associated with plasmid loss
P. HILLIER, D. A. J. WASE, A. N. EMERY and G. L. SOLOMONS

61 Partial purification and characterization of a polyphenol esterase from *Aspergillus niger*
W. MADANI, S. KERMASHA, M. GOETGHEBEUR and M. TSE

71 *Patent Survey*
75 *Bibliography of Process Biochemistry*

Number 2

85 Kinetic studies on the carboxylation of 6-amino-penicillanic acid to 8-hydroxy-penillic acid
C. M. HENRIKSEN, S. S. HOLM, D. SCHIPPER, H. S. JØRGENSEN, J. NIELSEN and J. VILLADSEN

93 Influence of light intensity on the kinetic and yield parameters of *Chlorella pyrenoidosa* mixotrophic growth
MA. E. MARTÍNEZ, F. CAMACHO, J. M. JIMÉNEZ and J. B. ESPÍNOLA

99 Biosorption of toxic metals: an equilibrium study using free cells of *Arthrobacter* sp.
F. VEGLIO, F. BEOLCHINI and A. GASBARRO

107 High protein expression in fermentation of recombinant *Pichia pastoris* by a fed-batch process
YINLIANG CHEN, J. CINO, G. HART, D. FREEDMAN, C. WHITE and E. A. KOMIVES

113 Immobilization of rice limit dextrinase on γ-alumina beads and its possible use in starch processing
L. FUREGON, A. D. B. PERUFFO and A. CURIONI

121 Impact of the main phenolic compounds of olive mill wastewater (OMW) on the kinetics of acetoclastic methanogenesis
R. BORJA, J. ALBA and C. J. BANKS

135 Parametric optimization and biochemical regulation of extracellular tannase from *Aspergillus japonicus*
S. BRADOO, R. GUPTA and R. K. SAXENA

141 Production of gibberellic acid by fed-batch solid state fermentation in an aseptic pilot-scale reactor
S. BANDELIER, R. RENAUD and A. DURAND

147 Effect of mashing procedures on some sorghum varieties germinated at different temperatures
R. C. AGU and G. H. PALMER

159 *Patent Survey*
163 *Bibliography of Process Biochemistry*

Number 3

173 Lipid and γ-linolenic acid production by *Mucor inaquisporus*
E. V. EMELYANOVA

179 Carbon and nitrogen removal from wastewater by *Candida utilis*: kinetics aspects and mathematical modelling
C. P. ORTIZ, J.-P. STEYER and A. BORIES

191 Development of pilot-scale production of dry bacterial starter cultures for intensive manufacture of high quality meat products
V. A. SAMOYLENKO, T. V. YAKSHINA, R. R. OLEYNIKOV, YU. G. KOSTENKO, D. N. SPICYNA, G. I. SOLODOVNIKOVA and G. A. KUZNETSOVA

195 Protease from freely suspended and immobilised *Mirabilis jalapa*
I. M. TAMER and F. MAVITUNA

201 Continuous L-cysteine production using immobilized cell reactors and product extractors
OK HEE RYU, JAE YEONG JU and CHUL SOO SHIN

211 Enzyme encapsulation on chitosan microbeads
M. I. GONZÁLEZ SISO, E. LANG, B. CARRENÕ-GÓMEZ, M. BECERRA, F. OTERO ESPINAR and J. BLANCO MÉNDEZ

217 Empirical kinetic models for tryptic whey-protein hydrolysis
A. MARGOT, E. FLASCHEL and A. RENKEN

225 Production, partial purification and characterisation of lipases from *Pseudomonas fragi* CRDA 037
C. SCHUEPP, S. KERMASHA, M.-C. MICHALSKI and A. MORIN

233 Kinetic study of the bioconversion of D-sorbitol to L-sorbose by *Acetobacter pasteurianus*
FAN-CHIANG YANG and YEIK-HWA LIM

237 Production of fructo-oligosaccharides by levansucrase from *Bacillus subtilis* C4
O. EUZENAT, A. GUIBERT and D. COMBES

245 Evaluation of solvent and pH for extractive fermentation of butyric acid
D. VANDÁK, J. ZIGOVÁ, E. ŠTURDÍK and Š. SCHLOSSER

253 *Patent Survey*
257 *Bibliography of Process Biochemistry*

Number 4

265 Recovery of cephalexin from dilute solution in a bulk liquid membrane
G. C. SAHOO, A. C. GHOSH and N. N. DUTTA

273 Production of actinorhodin by *Streptomyces coelicolor* in batch and fed-batch cultures
S. ATES, M. ELIBOL and F. MAVITUNA

279 The influence of ion exchange chromatography conditions on aggregation of equine IgG
J. D. LEWIS and S. L. NAIL

285 Impact of process parameters on L-glutaminase production by marine *Vibrio costicola* in solid state fermentation using polystyrene as an inert support
G. N. PRABHU and M. CHANDRASEKARAN

291 Depolymerization of phenolic polymers using horseradish peroxidase in organic solvent
HYUN JOO, HEE JEONG CHAE, JOO SANG YEO and YOUNG JE YOO

297 Biobleaching procedures for pulp from agricultural residues using *Phanerochaete chrysosporium* and enzymes
L. JIMÉNEZ, C. MARTÍNEZ, I. PÉREZ and F. LÓPEZ

305 Separation of cephalosporin C acylase and penicillin V acylase from *Aeromonas* ACY 95 by chemical treatment
S. S. AMBEDKAR, B. S. DESHPANDE and J. G. SHEWALE

309 Production and characterization of gelatinous protein extracts from turkey deboner residue
L. G. FONKWE and R. K. SINGH

319 A staged purification process to remove heavy metal ions from wastewater using *Rhizopus arrhizus*
A. ÖZER, H. I. EKIZ, D. ÖZER, T. KUTSAL and A. ÇAGLAR

327 A simplified predictive model for biologically activated carbon fixed beds
G. M. WALKER and L. R. WEATHERLEY

337 Effect of high hydrostatic pressure on the temperature dependence of *Saccharomyces cerevisiae* and *Zygosaccharomyces rouxii*
CHINSHUH CHEN and CHING-WEN TSENG

345 *Patent Survey*

351 *Bibliography of Process Biochemistry*

Number 5

361 High-solids aerobic decomposition: pilot-scale reactor development and experimentation
J. S. VANDERGHEYNST, J. M. GOSSETT and L. P. WALKER

377 Fractionation of citrus pectin on diethylaminoethyl-cellulose columns
S. A. EL-NAWAWI and A.-M. S. ISMAIL

381 Factors affecting gelation of high-ester citrus pectin
S. A. EL-NAWAWI and Y. A. HEIKEL

387 Microfiltration membrane bioreactor in stirred backflush operation for biotransformation using intact cells
YI FENG SHI, FENG XIE JIN and YI YING WU

391 A recurrent neural network for a fed-batch fermentation with recombinant *Escherichia coli* subject to inflow disturbances
P. R. PATNAIK

401 Production and separation of the methionine rich fraction from chick pea protein hydrolysate generated by proteases of *Bacillus amyloliquefaciens*
S. GEORGE, B. SIVASANKAR, K. JAYARAMAN and M. A. VIJAYALAKSHMI

405 Saccharification of corn fibre by combined treatment with dilute sulphuric acid and enzymes
K. GROHMANN and R. J. BOTHAST

417 Characteristics of antibiotic production in a multiphase system
M. ELIBOL and F. MAVITUNA

423 Mathematical modelling and simulation of catechol production from benzoate using resting cells of *Pseudomonas putida*
HEE JEONG CHAE and YOUNG JE YOO

433 A new method for immobilization of β-galactosidase and its utilization in a plug flow reactor
S. ATEŞ and Ü. MEHMETOĞLU

437 Enhancement of lipase production during repeated batch culture using immobilised *Candida rugosa*
S. BENJAMIN and A. PANDEY

441 Effect of immobilisation on the stability of bacterial and fungal β-D-glucosidase
M. D. BUSTO, N. ORTEGA and M. PEREZ-MATEOS

451 *Patent Survey*
455 *Bibliography of Process Biochemistry*

Number 6

467 Comparison of the heavy metal sorptive properties of three types of immobilized, non-viable *Saccharomyces cerevisiae* biomass
A. STOLL and J. R. DUNCAN

473 Removal of Basic Blue 41 dye from aqueous solution by linseed cake
R. M. LIVERSIDGE, G. J. LLOYD, D. A. J. WASE and C. F. FORSTER

479 Immobilization of lipase onto lipophilic polymer particles and application to oil hydrolysis
M. MURRAY, D. ROONEY, M. VAN NEIKERK, A. MONTENEGRO and L. R. WEATHERLEY

487 *Pseudomonas putida* as a receptor element of microbial sensor for naphthalene detection
A. N. RESHETILOV, P. V. ILIASOV, A. E. FILONOV, R. R. GAYAZOV, I. A. KOSHELEVA and A. M. BORONIN

495 Methionine enhances sugar consumption, fragmentation, vacuolation and cephalosporin-C production in *Acremonium chrysogenum*
L. KARAFFA, E. SÁNDOR, J. KOZMA and A. SZENTIRMAI

501 The effect of temperature on the modification of sorghum and barley during malting
R. C. AGU and G. H. PALMER

509 Production of methane from green pea shells in floating dome digesters
K. MADHUKARA, H. R. SRILATHA, K. SRINATH, K. BHARATHI and K. NAND

515 Definition of optimal conditions for the hydrolysis and acidogenesis of a pharmaceutical microbial biomass
V. PENAUD, J. P. DELGENES, M. TORRIJOS, R. MOLETTA, B. VANHOUTTE and P. CANS

523 An examination of the treatability of a simulated textile wastewater containing Maxilon Red BL-N
M. BASIBUYUK and C. F. FORSTER

529 Synthesis of biotechnologically relevant heterologous proteins in filamentous fungi
R. RADZIO and U. KÜCK

541 *Patent Survey*
545 *Bibliography of Process Biochemistry*

Number 7

555 Preparation of immobilized cellulase beads and their application to hydrolysis of cellulosic materials
M. KUMAKURA

561 Cellulase production by *Trichoderma* sp. grown on corn fibre substrate
S. D. VLAEV, G. DJEJEVA, V. RAYKOVSKA and K. SCHÜGERL

567 Kinetics of phthalic acid ester degradation by acclimated activated sludge
J. WANG, P. LIU, H. SHI and Y. QIAN

573 Bacterial attachment; its role in bioleaching processes
S. PORRO, S. RAMÍREZ, C. RECHE, G. CURUTCHET, S. ALONSO-ROMANOWSKI and E. DONATI

579 Volatile by-products formed in low-temperature wine-making using immobilized yeast cells
E. BARDI, A. A. KOUTINAS, C. PSARIANOS and M. KANELLAKI

585 The inducibility of 9α-steroid hydroxylating activity in resting *Rhodococcus* sp. cells
S. MUTAFOV, B. ANGELOVA, T. AVRAMOVA, L. BOYADJIEVA and I. DIMOVA

591 The simultaneous biosorption process of lead(II) and nickel(II) on *Rhizopus arrhizus*
Y. SAG and T. KUTSAL

599 Xylitol production from *Eucalyptus* wood hydrolysates extracted with organic solvents
J. C. PARAJÓ, H. DOMÍNGUEZ and J. M. DOMÍNGUEZ

605 Integrated membrane extraction, enzymic conversion and electrodialysis for the synthesis of ampicillin from penicillin G
D. RINDFLEISCH, B. SYSKA, Z. LAZAROVA and K. SCHÜGERL

617 Olive mill waste water treatment by immobilized cells of *Aspergillus niger* and its enrichment with soluble phosphate
N. VASSILEV, M. FENICE, F. FEDERICI and R. AZCON

621 *Patent Survey*
625 *Bibliography of Process Biochemistry*

Number 8

635 Aqueous two-phase extraction for downstream processing of amyloglucosidase
S. TANUJA, N. D. SRINIVAS, K. S. M. S. RAGHAVA RAO and M. K. GOWTHANMAN

643 Modelling of microbial growth for sequential utilization in a multisubstrate environment
P. DOSHI, R. RENGASWAMY and K. V. VENKATESH

651 Metabolic flux analysis of lactic acid fermentation: effects of pH and lactate ion concentration
K. V. VENKATESH

657 Influence of the phosphorus concentration on the growth kinetics and stoichiometry of the microalga *Scenedesmus obliquus*
M[a] E. M. MARTÍNEZ SANCHO, J. M. JIMÉNEZ CASTILLO and F. EL YOUSFI

665 Mild alkaline/oxidative pretreatment of wheat straw
N. CURRELLI, M. B. FADDA, A. RESCIGNO, A. C. RINALDI, G. SODDU, E. SOLLAI, S. VACCARGIU, E. SANJUST and A. RINALDI

671 Micro precipitation of lead on the surface of crab shell particles
M.-Y. LEE, J. M. PARK and J.-W. YANG

679 Enhancement of production of cloned glucoamylase under conditions of low aeration from recombinant yeast using a *SUC2* promoter
H. J. CHA, S. S. CHOI, Y. J. YOO and W. E. BENTLEY

685 Characterization of two extracellular proteinases from *Aspergillus terreus* and their role in the formation of low molecular weight endoglucanases
M. E. STEFANOVA, O. P. BELETSKAYA and I. S. KULAEV

691 Room and low temperature brewing with yeast immobilized on gluten pellets
E. BARDI, A. A. KOUTINAS and M. KANELLAKI

697 Medium improvement by orthogonal array designs for cholesterol oxidase production by *Rhodococcus equi* No. 23
M.-T. LEE, W.-C. CHEN and C.-C. CHOU

705 Investigation of the use of agricultural byproducts for fungal protein production
K. SCHÜGERL and W. ROSEN

715 Pectolytic enzymes co-immobilization on γ-alumina spheres via organophosphate compounds
C. DINNELLA, A. STAGNI and G. LANZARINI

723 *Patent Survey*
729 *Bibliography of Process Biochemistry*
739 *Contents of Volume 32*
745 *Author Index*